4: Joseph et al D, E-5 (1942-1943) 1949
NU28 Papago NU28

animals if income is to be raised and the range preserved, has been firm in insisting that the number of horses on the range should be governed by the need for them. In the face of much opposition and with the aid of jail sentence for noncompliance, they have seen to it that horses afflicted in a recent epidemic of dourine were killed and a strict quarantine maintained.

Furthermore, many of the flash-flood farms are now endangered by siltation resulting from soil erosion due to overgrazing of range lands. Hence stock reduction and the introduction of better grasses will help even those families which have no stock.

The Extension Department has been of great assistance to the Papago in improving their fields and herds. The latter has not been and will not be an easy task, for to the Desert People cattle are not a source of prestige. Cattle provide food and spot cash, but there is yet little of the attitude of making a paying business of cattle production. Furthermore, the Department will meet with at least tacit opposition for a long time, since white men's methods sometimes run counter to the old beliefs. Many Papago, for instance, think that their range is in poor condition, not because they have too many animals or because of prolonged droughts, but because so many horses have been killed off in recent years. The horse is endowed with magic powers, and the white men are only asking for trouble when they slaughter sick animals. Only long and patient education—of adults in the villages and of children in the schools—can dispel superstition. The Agency is well aware of these difficulties, and the staff has made conscientious efforts to explain and to persuade, rather than to compel, progress.

Though the quality of Papago cattle is still in need of improvement, standards have risen measurably in the past decade. Until 1930 the steer with the largest horns was considered the best; and as late as 1937 skinny Spanish cows with a horn spread of several yards, looking like great gaunt deer, still peered from mesquite thickets. Today Hereford cattle constitute most of the herds, and under the tutelage of the Agency the Council has established a tribal herd of registered bulls which individual owners may use to improve the breed.

Cattle is the largest single source of revenue, providing 36 per cent of Reservation income in 1940 (the last year before war wages and prices began to distort the normal picture), but agriculture is still the backbone of the Papago economy. Over half the twelve hundred Papago families do not own any cattle at all, and only a sixth obtain more than fifty dollars from this source in a normal year. On the other hand, almost all families do some farming. The estimated cash value of the products is small and forms only a sixth of

[Text continues on p. 35-Analyst]

4: Joseph et al D, E-5 (1942-1943) 1949
NU28 Papago NU28

total Papago income, but farming furnishes basic subsistence for over three-quarters of the families on the Reservation. It is now believed that cattle will never be fundamental in Papago economy but should be regarded as a supplement to the real basis of Reservation life—farming.

Other sources of income are few. About 6 per cent of tribal income (including subsistence) is derived from firewood and fenceposts cut from mesquite. There are known small deposits of gold, silver, lead, and manganese on the Reservation, but they are in the hands of whites and offer nothing but a little employment to Indians, as the Papago have only surface rights to their land, and any mineral rights belong to the federal government. (Any miner may acquire rights on payment of rental of the land and fees for destruction of property.) This is a sore point with the Papago, since they are the only Indians who do not have rights to minerals under their lands.[4]

Handicrafts furnish a small part of tribal income—about 3 per cent. The bulk of this income comes from the sale of baskets and pottery[5] through the tribal Arts and Crafts Board, which was established under the auspices of the federal Indian Arts and Crafts Board to provide a market for Papago handiwork. Papago baskets, made of yucca, willow, bear grass, and devil's-claw, are of the close-coil type; decorative design in black and white, with occasional green or red, is simple but often strikingly beautiful in its sharp contrasts. Through assisting the Papago to improve their work and get better prices for it, the Arts and Crafts Board should help to raise Reservation income. It should also give the Desert People experience in co-operative business which may serve as a foundation for ventures in other fields.

There are a few small Papago business enterprises on the Reservation, most of them trading posts, but returns from these stores are a minute fraction of tribal income. An increasing share of Papago income is from paid labor. As previously stated, for generations the Desert People tided themselves over lean years by going to Mexico or to the Pima country to work for ranchers or farmers, who paid them in food and seed. Now, however, wage work (and cattle sales) are shifting Papago economy from a barter to a cash basis. Em-

4. The reasons for this anomalous situation are partly political. Under the Gadsden Purchase Treaty of 1854, the United States agreed to respect the laws and customs prevailing in the area under Mexican rule. Since Spanish days, mineral rights had belonged to the crown or the state. For two years (1932–34) Papago lands were withdrawn from mineral entry and claim, but renewal of the treaty provision was made a part of the Indian Reorganization Act of 1934. Papago resentment is understandable, since some other Indian tribes derive substantial income from mineral leases. Known deposits on the Reservation are small, but there is always the chance of discoveries, since great copper deposits are being worked near by.

5. The Papago also make rawhide ropes, wooden spoons, and other articles, chiefly for their own use.

[Text continues on p. 37- Analyst]

4: Joseph et al D,E-5 (1942-1943) 1949
NU28 Papago NU28

ployers are the mining companies (chiefly at Ajo west of the Reservation), surrounding ranchers, and the foremen of the cotton fields along the Salt, Gila, and Santa Cruz rivers. Work in the cotton fields is largely on a family basis, but individuals work in the mines and in households in near-by cities. During the war there was an increasing demand for Papago labor, and some went to distant points to work in factories of all kinds. The government is also an employer: the Agency hires over a hundred Papago as clerks, bus-drivers, school housekeepers, range riders, and in other capacities, chiefly as unskilled laborers.

Even with the addition of wages, Papago income is very low. In 1940, before war wages had swollen the total, the average family income (including estimated value of products used by the family) was about $530 per year, but this does not present a true picture, for two-thirds of the families had incomes of only $265 or less. The more prosperous third, whose incomes brought up the average, were those with cattle, permanent jobs, or private business enterprises, most of whom lived in the southern and eastern districts. In 1943, war jobs, military allotments and extensive cattle sales forced by the drought brought average family income up to about $1,200, but this is obviously a situation unlikely to be duplicated.[6]

THE FUTURE OF PAPAGO ECONOMY

We have seen that the Papago live in a rural peasant economy which has only recently shifted to a cash basis. Money is increasingly important to the Desert People because they no longer produce most of their own food and clothing. A recent study of Papago food habits showed that over half the food used in the period of the study was purchased.[7] Even beef is often sold, and meat is bought.

Many things are imported which could be produced locally. There is a flour mill on the Reservation, but all flour sold at trading posts is imported. Though cattle-raising is the chief Papago cash industry, all the meat sold in two of the three Reservation stores handling this product is imported.

Almost all business on the Reservation is in non-Indian hands. A recent report states: "It is estimated that of every $100 that is received by the Papago, some $50 goes immediately into the hands of businessmen off the reservations. Not only does $50 out of every $100 received from the export of produce, cattle,

6. It is interesting to note that in this year the Papago family income was not much above the average *per capita* income for the country as a whole, $1,031 (Charles F. Schwartz, "State Income Payments in 1943," Table 1). For the state of Arizona, per capita income was $805.

7. Emma Reh, "An Economic Study of the Papago Indian Reservation, Arizona" (MS).

on the reservation. Indian residents of Sells on the whole, seem to be well aware of events occurring beyond the borders of the reservation.

Surprisingly, there is no real community organization. This is probably due to the cosmopolitan nature of Sells with residents having moved there from all parts of the reservation. The organizations which do exist revolve around voluntary associations, churches and cliques.

Residents of Sells have garden plots and some are cattle growers, but their main source of income is from salaries and wages, with the majority working for the Bureau of Indian Affairs, the Public Health Service, and the Papago Tribe.

Santa Rosa is not as large as Sells, nor does it have many of its characteristics. There is a community building, a government school, a government health center, a church, and a trading post with gasoline pumps. The community building is used for meetings which are held to plan ceremonies and various village projects. There are also many voluntary associations, all patterned after similar Anglo associations, such as a Woman's Club, an Athletic Club, and a Boy Scout troop.

The Gu Achi District Council meets in the community building and all political activity of the district is centered here. Santa Rosa, however, in spite of progressive tendencies, contains some of the most traditional elements of Papago culture found on the Reservation.

18: Kelly E-4, 5 (no date) 1963 NU28 Papago NU28

CHAPTER III

RESERVATION ECONOMY

233

Stock Raising. From the point of view of natural resources, the main Papago Reservation in its present state of development can be described in two words: cattle range. Approximately 15,000 head of cattle and horses are grazed on the reservation producing an estimated annual gross income of $650,000. [434]

175
233
[114]

The introduction of cattle to the Papago country has been summarized in some detail by Wagoner (History of the Cattle Industry in Southern Arizona, 1540-1940). He points out that Coronado's large herds of cattle and sheep, brought northward in 1540, were steadily reduced in numbers, and it is probable that none of those that escaped or were abandoned on the march survived as the basis for wild herds and flocks in the 16th and 17th Centuries. Nevertheless, before 1700 there were some 100,000 head of cattle in northern Sonora. How far north any of these herds drifted is not known.

The Papago livestock industry really begins with the systematic development of ranching by Father Kino in the 1690's and early 1700's, but numbers seem to have continued

families that hold cattle on the three reservations has been estimated at between 400 and 500. Metzler summarizes the economy of stock raising as follows (Metzler, 1959, p. 57):

> "The function of cattle for most families is the same as that of a reserve account in a bank. The cattle are not sold until other sources of income have been exhausted, then enough cattle are marketed to meet cash needs of the family until other sources of income again become available. When they have no more cattle they will start to sell off their horses."

It should be added that cattle raising is more than merely an economic enterprise. The Papago and their cattle may be compared to the Navajo and their sheep. In both cases a way of life has been developed which becomes relatively meaningless without livestock and the work of caring for animals on the open range in isolated desert areas.

The meaning of stock raising in the total economy of Papago family life can be assessed with fair accuracy because of the records that must be kept in connection with the tribal assessment of a 3 per cent tax on the value of all livestock sold from the reservation. In 1962 the tribe collected a total of $19,631.90 in taxes on a gross Indian income of $654,397 from stock sales. For a number of years sales have totalled about this amount, occasionally running higher. Owning from one to ten head of stock, most families have incomes of less than $400 per year from ranching. Probably no more than 40 families, according to Metzler, depend entirely on cattle sales for their yearly income. In keeping

233 433 434 422 with this estimate Robert Roether, reservation cattle buyer, is of the opinion that from 25 to 30 families own more than 100 head of breeding cows. Both of the above estimates are higher than the estimate provided by the Bureau of Indian Affairs.

178 433 Agriculture. Life on the Papago reservations has always depended, and still depends, upon multiple sources of family subsistence and income. The original pattern was a combination of hunting, gathering, and flood water farming. After 1700, hunting and gathering gradually gave way to cattle raising which, in combination with flood water farming, provided subsistence and some cash income. Farming is now declining and there is being established a new combination: cattle raising and wage work.

241 Flood water farming still persists, however, in spite of periodic drought, back-breaking work, and low yields. Wherever it occurs today it is usually an activity [462] [887] of older men who raise a small plot of corn, beans, squash, [434] and sometimes winter wheat, to supplement their income from [182] cattle, thus making it possible to live on the reservation the year around and according to the traditional Papago way of life.

Cash crop or commercial farming, as will be seen later, have not appealed to the Papago since competition from non-Indian farmers and the lack of running water require

241 farmed is now 3,930 acres. In other words, only 10 per cent
311 of the land formerly used is now being put in crops.
178

It may be assumed from our survey, and from other evidence, that this situation holds true for the entire reservation. A current estimate of about 1,000 acres in flood water farming is probably fairly accurate.

241 The reduction in acreage is not surprising. The
433 thing that is difficult to understand is that there should
178 still remain two or three hundred individuals willing to endure the hardships and the failures inherent in flood water farming. In 1914 there were few off-reservation jobs, and fewer Indians willing to leave the reservation in search of work. Farming, however unrewarding, was required to sustain
[887] life. This situation is no longer true except for some men, usually the older men, who cannot, or do not, participate in off-reservation wage work.

241 Irrigated Farming. During calendar year 1962,
311 Papago Indian farmers grew crops on 740 acres of irrigated land on the main reservation at Chuichu and on 45 acres of
[434] irrigated land at San Xavier. Gross income was $94,755,
[248] more than half from approximately 120 acres planted in cotton.

241 Since 1952 the number of acres farmed by Indians
311 at Chuichu increased from 530 to 1,360 (1957) but has now
178

246
134

"Some Papagos, however, have discovered a wider use for this type of farming. Some families have as much as 40 flood-plain acres devoted to the production of grain and forage crops for their livestock. Since this type of use is feasible, productive use of the entire flood-plain acreage on the reservation might be made.

[311]

000

"The tools and techniques used in flood-farming can be greatly improved so as to reduce the time required for constructing dykes and ditches, and for plowing, planting, weeding, and harvesting. . .

"A much sounder type of agriculture for the Papago family is irrigated subsistence farming. It fits in with their tradition of small farms and home food production. But it also assures adequate amounts of moisture and the timing of application so as to guarantee good yields. It would combine well either with off-farm employment or with livestock production."

Whether or not such a development as Metzler visualizes could be brought about will depend upon the cost of pumping water from deep wells (see Ground Water Report, page 27). It will also depend upon new regulations, opportunities and ideas with respect to land tenure, capital expenditures, and credit, not to mention the attitudes and interests of Papago Indian families. The present generation of Indian farmers, with few exceptions, have not been successful in industrialized large-scale farming. From two to three hundred Papago families have, however, continued to grow subsistence and feed crops on small flood water farms as a source of supplementary income. It is possible that some of these farmers would welcome a more stable farm income through the development of small irrigated plots, and that

241

[434]

000

463
464 Case No. 7. Male. Born in 1937. Has no farm land. Owns no cattle. Lives on reservation. No work experience. During past 12 months has been unemployed, living with parents.

Case No. 8. Female. Born in 1927. Father had fields, no longer used. No cattle. Worked about three months each year picking cotton, formerly received Aid to Dependent Children to take care of brothers and sisters. Now all work as cotton pickers. During past 12 months spent nine months unemployed on reservation, three months picking cotton off reservation.

Case No. 9. Female. Born in 1937. Joined WAC after leaving school. Married and living in Texas last 12 months.

Case No. 10. Female. Born in 1905. Grew up on reservation farm, father had livestock. Moved to Tucson after divorce and worked as cleaning woman and as cotton picker. During past 12 months has had steady common labor work for Tucson institution.

Case No. 11. Female. Born in 1935. Family had no fields, no cattle. Left Reservation in 1942. Attended school in Tucson and Phoenix. During last 12 months has been a University student.

162
463 Table 17 establishes the size of the Papago labor force and compares
464 this with the group outside the labor force. Contrary to usual practice we have
128 placed the unemployed outside the labor force since we listed as "unemployed" only those people who had little or no income during the twelve months period preceding our interview. In the vast majority of cases they have either taken themselves out of the labor force or are in fact unemployable. Individuals with unearned
434 income are usually also unemployed. The relatively small sums of money earned from basket making, wood chopping, and from the sale of a few head of livestock have been disregarded in our analysis. Individuals with such incomes of course, are to be found inside and outside the labor force.

162
463 Agriculture on the reservation is predominantly a matter of self-
434 employment and only a few families (variously estimated at from 20 to 30) gain their entire living from reservation farming and stock raising. The remaining families -- approximately 220 -- supplement their income through seasonal or temporary wage work. These are the individuals whose principal income is from reservation agriculture. Another group live on the reservation, have small farms or livestock,

but earn their principal income from off reservation wage work. A third group of small cattle owners live permanently off the reservation and leave their cattle in the care of relatives or employ someone to look after them.

Table 17. Papago Administrative Population. Labor Force Compared With Those Outside the Labor Force. Individuals 19 years and Over, 1959.

			MALE		FEMALE	
	Total	%	Number	%	Number	%
LABOR FORCE	2,535**	46.7	1,792	66.6	743	27.1
Agricultural	1,409	25.9	1,104	41.0	305	11.1
Non-Agricultural	1,126	20.7	688	25.6	438	16.0
OUTSIDE THE LABOR FORCE	1,905	35.1	407	15.1	1,498	54.7
Housewives	1,094	20.1	-	0.0	1,094*	40.0
Unearned Income	390	7.2	184	6.8	206	7.5
Unemployed	254	4.7	123	4.6	131	4.8
Students	167	3.1	100	3.7	67	2.4
EMPLOYMENT UNKNOWN	990	18.2	493	18.3	497	18.2
Total Population, 19 Years and Over	5,430	-	2,692	-	2,738	-

* An unknown number of housewives earn some income from seasonal farm work.
** An additional 47 men and two women were in the armed forces.

The 990 individuals for whom we have no data on employment are distributed by residence as follows: On reservation, 270; off the reservations in Arizona, 348; outside Arizona, 149; unknown residence, 323.

A more detailed breakdown of the labor force by type of employment and place of employment is given in Table 18,[1] which provides most of the facts upon which an analysis of Papago manpower resources must be based. The table attempts to do three things: separate the labor force by place of employment, by agricultural and non-agricultural employment, and by level of skill.

[1] [See table on p. 102 -- Analyst]

162 (1) On reservation, 461 (18.2%), on and off reservation, 335 (13.2%),
463 and off reservation, 1,739 (68.6%).

(2) Agricultural employment, 1,409 (55.6%), non-agricultural employment, 1,015 (40.0%), and mixed employment, 111 (4.4%).

(3) Skilled and semi-skilled workers, 248* (10.0%), and unskilled 2,287 (90.0%).

As was noted above, (Table 16, Page 94) about one-half of the Papagos in our records for whom we have residence data make their usual home on the [439] reservation. The data above show that 18% of the labor force earn their principal income from on-reservation agriculture and wage work and an additional 13% earn their principal income from both on and off reservation employment. The remaining group (close to 20%) usually live on the reservation but earn their principal income off the reservation.

463 We could not make a satisfactory distinction between the skilled and
128 semi-skilled workers. In addition, we have almost surely placed some semi-skilled
[115] workers in our unskilled categories. Most of our information is from neighbors or relatives of the people involved who know that a person was employed by a construction firm or in an aircraft factory, for example, but had no knowledge of the type of work performed. In other cases, individuals were variously employed at skilled and semi-skilled work and other individuals were variously employed at semi-skilled and unskilled work. Informants gave us, in most cases, complete data on these multi-employed individuals but there is still a subjective element in both the information and the coding.

162 Approximately ten percent of the Papago labor force is engaged in
463 skilled and semi-skilled employment. These are the farm equipment operators,

[text continues on p. 103]

*An estimated 30 individuals engaged in reservation stock raising and irrigated farming should perhaps be counted as semi-skilled or skilled. We did not make the distinction at the time and so the table shows a total of 299 unskilled workers in this category.

162
462
464

Males Compared With Females. There are 1094 more men than women in the Papago labor force and this, of course, is accounted for by the 1094 women who are housewives. The relative distribution of women and men as between skilled and unskilled work is about the same. It is somewhat surprising, however, to find that in actual numbers there are as many skilled and semi-skilled jobs for women on the reservation as there are for men. Preferential employment of Indians on reservations obviously works to the very decided advantage of Papago women where 51 have found skilled and semi-skilled jobs as compared with only 22 in similar capacities off the reservation (see Table 18).

162
462
463
434

As might be expected, proportionately more men than women earn their principal income from agricultural employment; 66% compared with 43%. The difference is to be found in the relatively large number of Papago women engaged in domestic service, a total of 318; about 43% of all working women.

162
434
463
464

The Reservation Labor Force. Statistics reported in Tables 16 and 18 show that 50% of the Papagos live on the reservation most of the time but that only slightly more than 31% earn part or all of their living there. About 80% of the reservation workers are in agriculture but it is at this point that our assignment of individuals to categories indicating "major" source of income may be misleading. The 80% of Papago workers who are in agriculture earn their living, with few exceptions, from a combination of reservation and off reservation income, where as the 20% of reservation workers who have non-agricultural employment earn practically their entire income from these jobs. These are the "well to do" Papagos who work for the federal government and the tribe.

162
464

A comparison of on and off reservation workers with those who are not in the labor force is also interesting. About 48% of the total population 19 years of age or over is in the labor force.

When the on reservation adults are separated from the off reservation adults, however, it is found that 42% of those on the reservation are in the labor

114
121
464
[101]

Papago Agricultural Workers in Pima County. Agricultural work off the reservation is of such great importance to Papago family economics that we felt it necessary to make a special study of this subject. The project was planned and executed in 1961 by Mr. Harland Padfield, a Department of Anthropology graduate student who is an authority on this subject. Unfortunately, the study was limited to Pima County since funds did not permit the extension of the research to other sections of southern Arizona.

162
463
464
[434]

Mr. Padfield was able to establish two points: (1) Papago Indians in farm work are shifting to other jobs than seasonal cotton picking and are not being displaced because of mechanization, (2) they account for 30 percent of the total man-hour input and 27 percent of the total wage input on Pima County farms and receive total annual earnings of about $630,000. The evidence, although not conclusive, also indicates that there is a steady increase in the training and use of Papagos in the operation of farm machinery and in other skilled jobs.

464

The author concludes his report with the following words: "These data should make it patently clear that with the Papago Reservation virtually surrounded by 370,000 acres of farm land needing a labor force in excess of 10,000 workers and a labor expenditure probably in excess of $13,000,000 annually, programs and policies aimed at the problem of Papago economics cannot ignore farm labor; neither can programs and policies aimed at the problem of farm labor ignore the Papago Indians."

124
115

Padfield's work was based upon an area sample which permitted him to generalize from detailed interviews with 21 of the 119 farm operators in Pima County with a total acreage of 29,796 out of 66,875. Data thus collected was supplemented through interviews with crew leaders who recruited the seasonal workers, mostly cotton pickers, for the farms drawn in the sample.

162
659
434
0273

Table 27. Welfare Cases and Payments to Papago Reservation Residents, Fiscal Years 1958 through 1962. (Source: State and Federal welfare statistical reports).

Category	Average Monthly Cases	Average Monthly Payments	Estimated Annual Payments
1958			
Old Age Assistance	273	$14,884	
Aid Dependent Children	102	9,331	
Aid to the Blind	9	603	
General Assistance	72	3,710	
Child Welfare	17	993	
Total	473	29,521	$354,252
1959			
Old Age Assistance	266	15,133	
Aid Dependent Children	102	9,644	
Aid to the Blind	7	482	
General Assistance	73	4,218	
Child Welfare	17	999	
Total	465	30,478	365,736
1960			
Old Age Assistance	255	16,161	
Aid Dependent Children	119	12,636	
Aid to the Blind	8	545	
General Assistance	70	4,489	
Child Welfare	8	810	
Total	460	34,661	415,932
1961			
Old Age Assistance	257	15,801	
Aid Dependent Children	135	14,540	
Aid to the Blind	9	594	
General Assistance	87	5,499	
Child Welfare	12	949	
Total	500	37,383	448,596
1962			
Old Age Assistance	266	16,191	
Aid Dependent Children	154	16,680	
Aid to the Blind	12	613	
General Assistance	104	4,634	
Child Welfare	n.a.	1,375	
Total	536+	39,483	473,796

162 as a basis for comparison, ADC cases occur in the ratio 1 to 6, OAA cases occur
657 in the ratio 1 to 7 and Aid to the Blind cases occur in the ratio 1 to 10.
171

The data given above reveal quite clearly the "vulnerable" situation
511 of most Papago families and the depressed economic conditions on the reservations.
657 The welfare picture, however, is not quite as bad as it appears to be. Indians
829 look upon their reservations as a place of security and support--not only in terms of the assistance rendered through federal agencies, but also the security and support that can be expected from kinsmen and neighbors in an Indian community.
[162] Indians in trouble return to the reservations and this is undoubtedly the reason why Jones found 465 individuals receiving welfare payments on the reservations in 1939 and we found only 32 such cases among Papagos living off the reservations.

128 Employment and Income on the Papago Reservations. Information on resi-
162 dence and place of employment as given in this report indicates how difficult it
434 would be to study a "reservation population" apart from a "tribal population." It has been shown that family movement on and off the reservations is a constant process and that the annual earnings of 350 adults, at the very least, are from sources both on and off the reservation. Another group of about 450 adults (not counting the unemployed and housewives) are recorded as having their "usual" home on the reservations but live on income from temporary and seasonal wage work on the outside.

128 Patterns of Papago employment and the many and varied sources of income
434 pose major problems in any attempt to learn the sum of Papago earnings family by family. Even in a sample survey, where the employment and earnings of a small number of families could be studied intensively, the findings would be less than precise for the hundreds of families who are multi-employed, irregularly employed,

and receive income from many sources. Records, of course, are not kept and Papago memory of such activities is vague.

There are three sources of income for reservation families where the numbers of individuals involved and the amounts received can be calculated with some degree of reliability: (1) reservation farming and stock raising (2) reservation wage work and (3) unearned income. For the other three principal categories (4) non-agricultural self employment (wood chopping, home crafts, etc.) (5) wage work on and off the reservations and (6) wage work off the reservations, we know the approximate numbers of adults involved, the approximate amount of hourly earnings, but we know nothing with respect to the numbers of hours of employment during the year.

Gross Papago family income from irrigated farming and stock raising on the main reservation and at San Xavier has been estimated at $754,152 (see Chapter III). To this must be added the value of subsistence crops grown by Papagos on flood water farms. The sum has been very generously estimated at $5,000.

No one has made a study of the cost of growing crops or raising livestock on the reservations. The major cost, however, is labor which may be counted as income. Other costs are probably in the neighborhood of $100,000 which gives us an estimate of about $650,000 as the annual Papago family earnings from reservation agriculture.

Reservation income from wage work has been calculated with fair precision for fiscal year 1963. The total is $809,264 (see Table 28).

Income from welfare (see Table 27) for fiscal year 1962 is estimated at $473,796. The total for the first three categories of income is as follows:

1.	Reservation farming and stock raising	$650,000
2.	Reservation wage work	809,264
3.	Welfare income	473,796
	Total	$1,933,060

162
434
464

Table 28. Income of Papago Indians Employed on the Main Reservation and at the San Xavier Hospital and Mission during Fiscal Year 1963.

Employer	No. Papago Permanent	Employed Temporary	Annual Income
Bureau of Indian Affairs	67 *	34	$327,872 65,104
Public Health Service	49	2	218,858 1,799
Papago Tribe	13	3	30,289 497
Kitt Peak Observatory	4	24	18,221 58,982
Catholic schools-missions	18	1	20,012 1,000
Reservation Traders	12	4	25,931 4,411
Reservation Restaurants	6		8,944
Reservation Gas Stations	4		8,580
Reservation Cattle Buyers	3		7,031
State Highway Department	2		10,379
Sells Post Office	1		674
Protestant Missions	2		660
Total	181	68	$809,264
Special 1963 Federal Works Project			301,498 **
Total for Fiscal 1963			$1,110,762

* Individuals in this column are employed on a year round basis but not necessarily full time.

**This is a non-recurring item, undoubtedly absorbed some workers who would have found work elsewhere, and will not be included in our calculations of annual reservation income.

By referring to Table 18 (page 102) the individuals who received income from these sources in 1959 may be identified by categories. It may be assumed that the numbers of individuals involved, as the amount of income, from farming, and stock raising have remained about the same. The number of permanent and temporary wage workers has gone up from 202 to 249 and the number of welfare clients has increased from 465 to about 550. 162 434 463

The numbers of individuals involved in the above categories in 1962 are thus: reservation farming and stock raising 239, reservation wage work 249 and welfare income 550.

We do not know the amount of agricultural income received by the 239 adults whose principal income was from this source since large numbers of cattle are owned by Papagos who work off the reservation. Neither do we know the amount earned by these 239 individuals from seasonal and temporary wage work. Perhaps the two about balance each other. Taking this as our assumption we have the following result.

Average annual income of adults engaged in stock raising, farming, and some temporary wage work is calculated at $2509 (239/$650,000). Average annual income of all reservation wage workers is $3250 (249/$809,264). Average annual income of "permanent" reservation wage workers is $3742 (181/$677,471). Average annual income of welfare recipients (individuals receiving payment and not including dependents) is $861 (550/$473,796). 434 463

We have thus accounted for 1038 of the 2596 individuals 19 years of age and older who make their usual home on the three Papago reservations. The remaining 1558 are distributed as follows: 735 are housewives or unemployed, 335 are part time farmers and stock raisers on the reservation and part time wage workers off the reservations and 468 secure all their income from seasonal and temporary wage work off the reservations. We know what these people do, but we are unable to calculate their income since there is no way of determining the average number of days or weeks they are actually employed during the year. 162 463 [128 [434

of days or weeks they are actually employed during the year. Average annual earnings for this group of 803 individuals would probably be located somewhere between the average income of welfare recipients ($861) and the individuals engaged principally in reservation farming and stock raising ($2309).

Only a sample survey, now made possible by the existence of a Papago population register, could determine more precisely the annual income of Papago adults, or Papago families. The answer, whatever it might be, would add little to our knowledge. We know the nature of Papago employment, we know the approximate numbers of individuals in each of the categories of employment, and we know the magnitude of the problems of unemployment, underemployment, and dependence upon welfare. To know the dimensions of a problem, however, is only the beginning. This must be followed by an examination of the facts which may lead to a solution. A great deal, but by no means all, of the necessary information is contained in this report. The task of analysis, however, must be deferred at this time except for certain more obvious considerations which are treated below.

Conclusion. The outstanding fact, and this runs as a thread through all our statistics, is that the Papago Indians are solving their own problems. Starting from very nearly "zero" in 1917, when the Sells Reservation was established, the Papagos have shown great skill and persistence in finding ways to remain self-supporting in the face of meager resources and a rapidly changing world around them. They have done more than this. A substantial number--more than 300--Papago boys and girls have secured an education and have moved into productive employment as skilled and semi-skilled workers. Another substantial group, about 38% of all adults, have found permanent and near permanent employment on and off the reservation in spite of language, cultural, and educational handicaps.

The trend of events is clearly discernible in our material. Papago families remain on the reservations, taking advantage of all possible income

19: Dobyns E-5 (1950) 1951 NU28 Papago NU28

HOW the Papago Indians Work

THE FAMILY -

221
444
594
361
(434)

The approximately 2,000 Desert People who move out into the cotton fields from their reserves to work do not move alone. The family--father, mother and children--moves as a unit.

> "It should be emphasized that, although a larger percentage of his income is obtained from work off the reservation, the Papago wage worker is not generally a footloose migratory laborer according to the usual pattern in the United States. The Papago laborer usually takes his family with him and maintains his home on the reservation."[1]

(162) The Papago family living in Pinal and Pima county labor camps in 1950 averaged some 4½ persons,[2] making the total number of Desert People living in labor camps at the peak of the cotton harvesting season in the neighborhood of 4,500.

162
594
361
871

The usual Papago family in a labor camp included a father and mother and two or three children. Families with children had 3 oftener than 2.[3] About 60% of the Papago families working in the cotton fields brought school children with them from the reserves.[4] What this meant to public schools in the trading centers of the cotton growing area may be deduced from the fact that families with school-age children had on the average 1.6 such offspring to be taught in the schools.[5] If both father and mother work, this means school authorities in the cotton-growing areas of Pima and Pinal counties should expect to provide educational facilities for .8 Papago school children for approximately 60% of the total number of Papago harvesters.

---

[1] Thompson, 1951, p. 71.
[2] 247 families had 208 persons, an average of 4.43 individuals in each family. (Actually these families included some additional persons not enumerated.)
[3] 28 families with children had 64, averaging 2.8857.
[4] Of 31 families giving information, 18 brought school-age children to the camps, or 58.1%.
[5] The 18 families brought 29 school-age children.

465 The standard rate for picking upland cotton in southern Arizona during the 1950 season was $3.00 per 100 pounds. So the average daily wage for Papago men was approximately $6.00, with a range from about $3.85 up to $9.00.

462 465 Papago women apparently are slower pickers than their husbands. They seem to average about 150 pounds a day of upland cotton.[1] This would give them a daily wage of $4.50. For the 5½-day work week Papago men averaged about $33 and their wives about $25. However, since women generally take time off from picking to wash clothes, do some cooking, clean up the cabin, etc., it is likely that many of them earn no more than $12 to $15 per week. There were 17 weeks between September 1, 1950, and the end of the year. The hypothetical average Papago man could have earned some $560 picking cotton over this period. His wife could have added about $200 to $425 depending on how many days in the week she worked. In families with husband and wife picking, income for the season could run $750 to $1,000. It is extremely doubtful if any Papago family actually earned so much.

● 434

461 293 [434] One reason income of the Desert People in the fields is lower than the theoretically possible figure is that they do not seem to put in a full work week. Their work week is nearer 4½ than 5½ days,[2] lumping men and women together. This simply indicates men put in a full 5½ day week, but women only work about half the days in the week. An important factor in time lost from work by the Desert People is liquor. Cotton farmers are almost unanimous in their condemnation of Indian drinking. The usual opinion is Papagos start drinking Friday night, and are unable to work Monday, wobbly Tuesday, at full steam Wednesday. Of course, this picture in farmers' minds has been painted by exceptional individual Papagos and doesn't represent accurately the situation for all Papagos. But it does reflect the great amount of time lost by many Papago individuals because of their drinking habits.

461 796 Another cause of lost working time for Papago harvesters is the religious celebration. Most important is the fiesta of St. Francis in October. Many farmers throw up their hands then, and gripe loudly about families that

[TEXT continues on P. 91]

[1] Only 3 women told the author how much they picked, and 1 worked a short day. They averaged 130 pounds per day.

[2] 8 Papagos in both counties who didn't lose time from drunkenness worked 37 days in the week preceeding their interview, an average of 4.6.

461 leave for two or three weeks or a month. However, the
796 usual pilgrim to Magdalena, or Chuwhiy Guwsk at this time loses only one work-week, and those going to San Xavier less. Secondary fiestas in point of time lost from work are the fiesta of St. Francis in December at San Xavier and All Souls at the beginning of November.

461 The graph of migration to the fields shows that some
434 families start picking as late as November. If they come
221 in the middle of the month and work until the first of the year at average speed, the man and wife can earn about $280. More than likely they will go to San Xavier December 2, take time off at Christmas, and work only 5 weeks, earning perhaps $230 for their abbreviated season.

Families coming to work during October make more, of course. Those starting to pick in September approach the maximum possible for harvesters to earn. Assuming the worst possible about a family, that the husband loses 2 days each week from hangovers, making only $21 a week, and that the family leaves for Magdalena the first of October and goes home to the reservation until after All Souls, and then spends a week away from work at San Xavier's Saint's Day in December, having come to work the second week in September to begin with, husband and wife should each make about $200, a total of some $400 for the worst conceivable family.

A family which starts work about mid-September, loses the first week of October at fiesta, and spends a week at home sometime during picking season is apparently an average family. It would receive approximately $335 during the season.

461 The picture for American-Egyptian cotton is somewhat
433 different from upland. The bolls are smaller and sharper, and the lint harder to pick out. Papago men and women seem to pick this type cotton at about the same speed. Both sexes average around 100 pounds per day.[1]

434 At the rate in 1950 of $5.00 per hundred pounds, a
461 husband would make $27.50 for a 5½ day week. If his wife
[221] picked 3½ days, the team would earn $45, and if she picked every day, they would receive $55 for their week's work. The "average" family picking American-Egyptian cotton from

[1]Admittedly this figure is based on a very small sample, only 8 men and 8 women.

221 mid September and losing 2 weeks for trips would earn a-
434 bout $585 during the season. Although this is $50 or so
461 under the amount the same family might make picking upland
[466] cotton, the Desert People are willing to pick American-Egyptian varieties. This is a point in their favor with cotton farmers, who have a difficult time hiring enough pickers to harvest long staple plantings. It is 1 reason growers favor Indian cotton pickers--they pick whatever cotton is in front of them, American-Egyptian or upland, scattered or thick, without grumbling. They don't sneak clods or rocks into their sacks to make weight, but on the contrary pick clean, high grading fiber. These are most attractive traits to farmers harrassed by more articulate hands willing to trim profit-fat farmers by sharp practice if possible.

PAYMENT

465 Information gathered in this study indicates there is no differences in cotton pickers' payment for any reason other than growers bidding for labor. Over most of the picking season, pickers of every size, age, and description receive a standard price for their cotton, agreed on beforehand by growers. In 1950 this standard piece-work rate was $3.00 per 100 pounds of upland cotton and $5.00 or $6.00 per 100 of American-Egyptian. Toward the end of the season there was some variation as growers bid for the shrinking supply of labor willing to clean up picked-over fields. Some paid $7 per 100 for long-staple picking. Some paid $2.25 and some $2.50 for "snapping" upland--breaking bolls off entire from the stems. Others paid $3.00 for picking what could be picked and snapping the rest.

There is no such uniformity in method of payment. A majority of growers pay off their hands in cash every time the picker weighs a sack of cotton, or every evening for the weight picked that day.[1] The practice of keeping a cash box in the field to pay pickers as they weigh in is commoner in Pima than in Pinal county. Almost two-thirds

---

[1] 44 growers of 85 who gave information paid in cash: 52%. The 85 planted 28,630 acres of cotton, averaging 336.8 acres, 2.3 larger than the average of all farms studied, so they may be taken as quite representative.

434
464

Probably the whole body of Papago cotton harvesters earned a gross income in the neighborhood of $600,000 in 1950.[1] This amount very likely represents about half the total cash income of the Papago Indians in 1950.[2] Added to wages earned in the Ajo and reservation mines, working for the government, the Tribe, traders, and the highway department and in domestic service, and the wages of Papago farm workers during the rest of the year, this figure probably represents a total wage labor income comprising over 60% of all Papago income.[3]

511

The $600,000 gross cotton picking income estimate does not represent anywhere near that amount in take-home to the reserve pay, however. Workers must support themselves while they are picking cotton, pay for their pilgrimmages on religious occasions, for any trips they take back to the reserves during picking season, and for clothes and food purchased against lean days without work after picking is done.

During the war it was estimated that $50 of every $100 received by Papagos was spent by them in the trading posts on their reserves at once.[4] Since many Papagos were in the services or doing defense work who are now on the reserves or picking cotton, the proportion is probably only slightly lower. Almost as much went into the coffers of merchants outside the reserves during the war[5] and this amount has increased if anything at the expense of reservation traders. In any case, the Desert People can return home with little cash.

---

[592] [1] Calculated as follows: Average seasonal income per family with man and wife picking is about $600 ($635 in upland or $585 in American-Egyptian, but a family usually had to pick some of both) assuming the workers starting before September approximately balance those starting later. The number of families with $600 gross income in 1950 was about 1,000 (figuring 2 pickers per family in a labor force of 2,000). Actually income was probably higher because of additional amounts earned by children after school hours and on holidays, and those families with more than 3 steady pickers, and families in which wives worked a full week.

[2] Laboring wages made up 56% of Papago income in 1947, and the figure is undoubtedly higher now. Secretary of the Interior, 1949, p. 51.

[3] Program, Papago Reservations, 1944, p. 45.

[4] Ibid., p. 45.

273 One isolated rural store, at
452 least, sold Papagos wine on credit in 1950—an
439 ultimate easing of the usual difficulty Indians find in buying intoxicants!

273 Many individual Papagos picking cotton probably
[434] have no cash surplus from their season's labor be-
[454] cause they spend all their extra money for liquor.
[511] They work long enough to get drunk, then lay off until
[526] they are both broke and sober again. This type of individual gives the whole Papago labor force a very evil reputation. But neither disapproval or employers nor social disapprobation within the Papago tribe seem to be strong enough to curb drinking.

000 Probably repeal of federal law prohibiting liquor
to Indians would remove some of the attraction liquor
[273] holds for the Papagos. It would surely cut down on the number of staggering drunks—the usual state of Papago drunks—in allowing the Desert People to sit down in a bar like other civilized human beings and drink slowly and socially instead of paying an inflated bootlegger's price for inferior liquor to be gulped down immediately in a dark alley before a policeman confiscates it. Some policemen make a semi-racket of letting known bootleggers operate, and waiting until Papagos are thoroughly drunk before arresting them—a practice resulting in considerable police department revenue, and some extra cash for the officers, if some observant growers are to be believed. But the Desert
273 People do not drink merely because they aren't supposed
182 to. The basic reasons lie deeper in their psychology,
154 and are undoubtedly tied into emotional insecurities bred from economic uncertainty and the stresses arising from getting along with only half-understood Anglos.

3: Whited G-5 (1890) 1894 NT15 River Yumans
Papago NU28

311 In the spring of 1890 the land was allotted to the Indians in severalty, and it may now be divided as to quality as follows:

	Acres.
Land that is farmed	500
Land that is not now farmed on account of deficient water supply	1,500
Timbered land allotted	5,000
Mesa land, suitable for pasturage, allotted	35,000
Mountain land, including desert land that can be pastured 2 months in the year	20,000

The 1,500 acres not farmed on account of deficient water supply may be farmed when a better and more economical mode of irrigation is adopted than that now practiced by the Indians. The 5,000 acres of timbered land is what is usually called mesquite land, from which the Papagos procure their fuel and sell considerable quantities from year to year. The 20,000 acres of mountain land is next to worthless.

There are 94 heads of families on the reservation, and a little more than 5 acres of farming land (land that is farmed) are allotted to each head of a family. The 500 acres of allotted land are surveyed and staked out. The area of land cultivated is diminished, and no progress is being made in methods of farming. Most of their income seemed to be obtained from the sale of wood and hay cut on the reservation.

[1434]

AGRICULTURAL PRODUCTS RAISED AND STOCK OWNED BY INDIANS FOR 1889-1890.

241

PRODUCTS, STOCK, AND LAND.	Number.	Value.
Total value of agricultural products		$5,170
Bushels of barley	4,000	3,000
Bushels of corn	1,000	1,000
Bushels of vegetables	1,000	1,050
Melons	200	20
Pumpkins	1,000	100
Tons of hay cut	100	1,000
Total value of live stock		4,325
Horses owned by Indians	200	3,000
Cattle owned by Indians	150	1,300
Domestic fowls owned by Indians	100	25
Acres under fence	14,000	
Fence made during year (rods)	7,100	

231

342 All of the Papago Indians living on reservations are in a village near San Xavier church. Their dwellings
493 are mostly rude adobe, with dirt roofs and few windows, and are almost destitute of furniture except the most
291 primitive. There are only 14 comfortable adobe houses. Many of the Indians own farm wagons, though their
797 farming tools are rude and unserviceable. The men all wear the civilized dress; the women also wear dresses similar to those worn by the whites, but leave off their shoes on ordinary occasions. It is claimed that 250 of the Indians living on the reservation are members of the Catholic church.

STATISTICS OF THE RESERVATION PAPAGOS.

162

Whole number living on the reservation		363
Males	184	
Females	179	
Children under 1 year of age		23
Males	11	
Females	12	
Number married		108
Number over 30 years of age who can read		10
Number who can read and write		10
Number who can use English enough for ordinary conversation		1 38
Number of children of school age		1 85

658 797 SCHOOLS.—The Catholic church has provided 2 neat, well-furnished schoolrooms adjoining San Xavier church, which will accommodate about 70 pupils. A school was maintained there during the year 1889 by the Sisters of the order of Saint Joseph, without pecuniary aid from the United States. The average attendance for the year ending June 30, 1890, was about 30. In addition to elementary studies the girls were taught sewing, crocheting, knitting, and minor household duties. A few of them became quite skillful in operating the sewing machine. The great drawback to the prosperity of the school was the irregularity in attendance. The school was again opened in September, 1890.